

REMARKS

Claims 1-8 were pending prior to this amendment and response. The claim amendments are believed to place the claims in better condition for allowance (or for appeal) without creating an undue burden for the Patent Office.

Independent claim 1 was previously amended to stress that a private colormap is not placed in the frame buffer (to avoid flashing caused by swapping of colormaps) and, in this response, to include the limitations of claim 2 that are not shown by the cited references (e.g., storing information received from an application program in the secondary lookup table, performing a closest match to a color in the default colormap (not in a private colormap as was previously the case), and then returning the closest match from the default colormap (such that all applications use the same colormap - the default colormap). Claim 2 is cancelled and Claim 7 is amended to correct claim dependency. Claim 3 is amended to clarify that swapping is not performed (with support provided at least at page 10, line 20). Claim 6 is amended to further define how private colormap simulation is performed using a secondary lookup table (with support provided at least at page 10, lines 13-18 of the specification).

Further, claim 7 is amended to clarify that performing and returning a closest match is only performed in the method of claim 7 when as noted in element of Figure 5 space is not available in the "default colormap" rather than "the secondary lookup table" as previously submitted. Claim 8 was rewritten in independent form to protect the concept of the use of the secondary lookup table (rather than a private colormap) to transparently perform color requests. No new matter is introduced by the amendments. Claims 1 and 3-8 remain in the application for consideration.

Rejection under 35 U.S.C. § 112

In the March 25, 2003 Office Action, claims 1, 2, 5, 7 and 8 were rejected under 35 U.S.C. § 112, first paragraph, as containing matter that was not sufficiently described in the application as filed. Specifically, in claim 1 (and, therefore, claims 2, 5, 7, and 8 that depended from claim 1), the language "... a secondary lookup table for storing information received from the application program relating to the intercepted request" was not believed to have been explained or disclosed in the specification. In claim 7, the addition of "... when determined not a read-only

request, performing the storing and only performing the performing the closest match and the returning when a space is not available in the secondary lookup table,..." was not believed to have been disclosed in the specification.

In the "Response to Arguments" section in paragraphs 18 and 20 of the Office Action, it was stated that Figures 4A, 4B, and 5 and associated text did not disclose the use of a secondary lookup table in place of a private colormap as now claimed, and hence these claim amendments apparently were not considered when determining the allowability of the amended claims. Applicant apologizes if the specific disclosure of this new claim language in the specification was not apparent from the reference to Figures 4A, 4B, and 5 and related text. Further, claim 7 is amended to clarify that performing and returning a closest match is only performed in the method of claim 7 when as noted in element of Figure 5 space is not available in the "default colormap" rather than "the secondary lookup table" as previously submitted. No new matter was added by this language, however, and the following is a more detailed description of examples of where this claim language was described in detail sufficient to satisfy 35 U.S.C. § 112, first paragraph. Hence, examination of claims 1, 5, 7, and 8 with the added language is respectfully requested.

The language "... a secondary lookup table for storing information received from the application program relating to the intercepted request" is explained beginning with reference to element 406 of Figure 4A which is entitled "Simulate Allocation of Private Colormap." In the specification at page 10, lines 11-23, the process passes control to operation 406 which performs one or more steps to "simulate allocation" of a private colormap. Such simulation "involves transparently using a secondary lookup table, which can be stored in conventional memory, having entries which are mapped to the entries of the default colormap." "Colormap flashing is prevented since the default colormap is retained in the frame buffer, rather than being swapped out...Instead of returning a "private" colormap, the software returns a reference to the default colormap."

Further support for this language is provided in Figure 5 (see at least elements 504-516) and related specification text. Without repeating the entire specification, the Patent Office's attention is directed to page 12, beginning at line 3. At this point, the specification states that "operation 506 provides a secondary lookup table in

conventional memory." At line 15, "Operation 508 allocates the next available cell in the secondary lookup table to satisfy the X-client's requests for an allocation of a private cell." At line 19, "then the private color can be stored within the empty cell of the default colormap...allocated as a shared (read-only) cell." At page 13, line 4, "Operation 516 associates a cell of the secondary lookup table with the location of the cell from the default colormap...location of the cell from the default colormap will either be the location of the cell which was written to by operation 512 with the new color data, or the closest matching cell of the default colormap determined by operation 514." At least these elements of the Figures 4A, 4B, and 5 and the related specification support the language "a secondary lookup table for storing information received from the application program relating to the intercepted request."

The language of claim 7 of "when determined not a read-only request, performing the storing and only performing the closest match and the returning when a space is not available in the default colormap" is shown in Figure 5 elements 500, 506, 508, 510, and 514. Supporting text is provided at page 11, line 13 to page 13, line 8. At line 17, page 12, "Decision operation 510 determines if there is space available in the default colormap to support the private cell requested by the X-client application. In other words, if the default colormap has empty cells, then the private color can be stored within the empty cells of the default colormap. If so, operation 512 stores the private color in the next available cell of the default colormap. This cell will be allocated as a shared (read-only cell). If decision operation 510 determines that there is no space available in the default colormap, then operation 514 performs a closest match to match the private color to a closest match of a read-only color in order to satisfy the X-client's private cell request." With the amendment of claim 7, it is believed this new language is clearly disclosed by the originally-filed specification and figures and also, is useful for distinguishing the claimed process from cited references.

Rejection under 35 U.S.C. § 102

In the March 25, 2003 Office Action, claims 1 and 6 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,703,627 ("Young"). This rejection is traversed based on the claim amendments and following remarks.

Claim 1 was amended to include the limitations of claim 2. As a result claim 1 is not anticipated by Young. Specifically, Young at col. 6, lines 57-62, col. 5, lines 2-5, and Abstract 1-28 cited in the Office Action provides no teaching of utilizing a "secondary lookup table" to perform "simulating that allocation of the private colormap using a default colormap." Young provides no teaching of performing a closest match and then returning the closest match.

The following paragraphs are included as they were presented in the prior response for the convenience of the Patent Office in understanding the invention, especially as claimed in claim 1, and how the invention of claim 1 is differentiated from Young:

"Generally, the invention is directed toward preventing colormap flashing by simulating allocation of a private colormap – without actually ever developing or creating such a private colormap. Colormap flashing occurs when a switch is made between a default colormap and a private colormap. As discussed in the specification at page 10, lines 13-23, simulating allocation of a private colormap "involves transparently using a secondary lookup table...having entries which are mapped to the entries of the default colormap." This secondary lookup table is used so that the application program... 'believes' that it is still properly obtaining an allocated private colormap for its use, however, in actuality the default colormap is utilized. In this general manner, colormap flashing is prevented since the default colormap is retained in the frame buffer, rather than being swapped out. Instead of returning a 'private' colormap, the software returns a reference to the default colormap and then provides functionality so that the default colormap behaves like a private colormap." These features are not taught or suggested by Young which reduces or controls flashing but does profess to eliminate it (see, Abstract line 1, and lines 11-15 which note that copied cells from the default colormap to created private map cells do not flash – but, of course, the other cells would flash).

More particularly, independent claim 1 calls for a method that involves "intercepting a request...for an allocation of a private colormap" and in response "transparently simulating the allocation of the private colormap using a default colormap." The simulation (not actual creation) is performed as "the default colormap is retained in the frame buffer during the simulating" and instead of creating a private colormap "allocating a secondary lookup table for storing information

received from the application program relating to the intercepted request.” In the method of claim 1, the cells do not color flash because the method forces all requesting applications, even those requesting private colormaps, to use the same colormap, i.e., the default colormap, which avoids the later swapping from one colormap to another where some cells differ, which causes display flashing. These features of the method are not shown or suggested by Young and claim 1 is believed in condition for allowance.

Specifically, Young is cited for teaching all the elements of claim 1 in the Abstract, at col. 5, lines 2-5, and col. 6, lines 57-62. However, the Abstract discusses copying color values from the default colormap into a created private map which reduces flashing because these copied cells will not flash upon a later swap to a next colormap but cells that are not copied will flash (see, for example, Young at col. 5, line 66 where Young admits that a number of cells (such as those shown in Figures 5A and 5B) will differ and will flash). This is because a private colormap is created and placed in the frame buffer. The second technique of Young referred to as “colormap sharing” is discussed with reference to Figs. 6 and 7 and beginning at col. 6, line 19. This sharing simply teaches creating a private colormap that “shares” or copies all of the default colormap cells. Hence, flashing does not occur the application and swapping to the default but does occur upon switching to another application that has not established its private colormap in the same manner.

In contrast, the method of claim 1 does not build a new private colormap to control flashing, but instead retains the default colormap in the frame buffer. Each of the techniques of Young involves creating a new private colormap and then placing it in the frame buffer. Hence, Young does not teach each of the elements of the method of claim 1. Additionally, Young fails to teach the creation of a secondary lookup table for storing information from an applications request for a private colormap (but instead teaches the creation of private maps (see Figs. 3A-8B)). Hence, claim 1 is believed allowable over Young."

Claim 6 as amended calls for "transparently simulating the allocation of the private colormap using a default colormap, wherein the simulating includes allocating a secondary lookup table comprising entries mapped to entries in the default colormap." Young fails to provide any teaching of using a secondary lookup table

that has entries mapped to the default colormap. Hence, Claim 6 is not anticipated by Young.

Additionally, Claim 6 also calls for “determining whether a private color cell has been requested by the application program and writing said color cell to the default colormap.” The Office Action again cited the Abstract, col. 5, lines 2-5, and col. 6, lines 57-62 in Young for teaching this element. However, these portions of Young discuss determining free portions of the default colormap and copying cells from the private colormap to the default (see Abstract), but Young does not call for a “private cell” determination but instead simply copies all cells into the default as possible to control flashing. See, Young at col. 5, lines 2-9.

Rejection under 35 U.S.C. § 103

Additionally, in the March 25, 2003 Office Action, claims 2, 3 and 4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Young as applied to claim 1 further in view of U.S. Patent 5,406,310 (“Aschenbrenner”). This rejection is traversed based on the claim amendments and the following remarks. Specifically, the Patent Office is requested to provide a specific reference to "a secondary lookup table" used in the place of private colormaps.

The limitations of claim 2 have been added to claim 1, which is believed allowable over Young. Further, it is believed that Aschenbrenner fails to overcome the deficiencies of Young. Specifically, the method of claim 1 includes a step of allocating a secondary lookup table but this step is not found in Aschenbrenner. The Office Action at paragraph 15 states that Young teaches all the limitations of claim 1 except for the closest match comparison of the requested color with one in the default map. However, Young, as discussed above with regard to claim 1, provides no teaching of a secondary lookup table used instead of private colormaps. Young was cited in paragraph 11 of the Office Action at col. 6, lines 57-62, col. 5, lines 2-5, and Abstract line 1-28. However, Young at col. 6, lines 57-62 discusses "color allocations and/or default colormap sharing," at col. 5, lines 2-5 discusses "copying color values from a private colormap into free cells of a shared default map (at the same location)", and at Abstract line 1-28 discusses private colormaps and a default colormap. No discussion is provided of using a secondary lookup table but discusses modifying the default map to match private maps.

As discussed in the last response, Aschenbrenner does not overcome the failings of Young, and specifically fails to provide the claimed closest match step. "In the closest color set process described in Aschenbrenner at col. 6, lines 22-31, the user must select or choose the closest color routine which causes the process to be visible or **not** transparent. Additionally, image colors that cannot be loaded into a default table that were requested by an application program are compared against the colors in the default table and then the closest match is "substitute for the unloaded color" and then, according to Figure 5, the default table is transferred to the display table. There is no teaching of returning the closest match results to the requesting application" as required in claim 1.

Claim 3 is a computer program product that as amended calls for the simulating to be performed in part by "providing a reference to a cell in a default colormap." To date, no specific reference in Young or Aschenbrenner has been provided for this limitation of claim 3. Young teaches the creation of a private colormap so no teaching of referring to the default map rather than private colormap. Aschenbrenner is not directed to the simulation of a private colormap using the default colormap and transparently providing references to cells in the default map. Additionally, Claim 3 calls for "retaining the default colormap in the frame buffer" which is not shown in the art. Claim 4 depends from claim 3 and provides similar limitations as claim 1, and claim 4 is believed allowable for the reasons for allowing claim 3 and for allowing claim 1.

Conclusion

A check is provided for the fee associated with the addition of an independent claim in excess of 3 independent claims, but any identified fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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